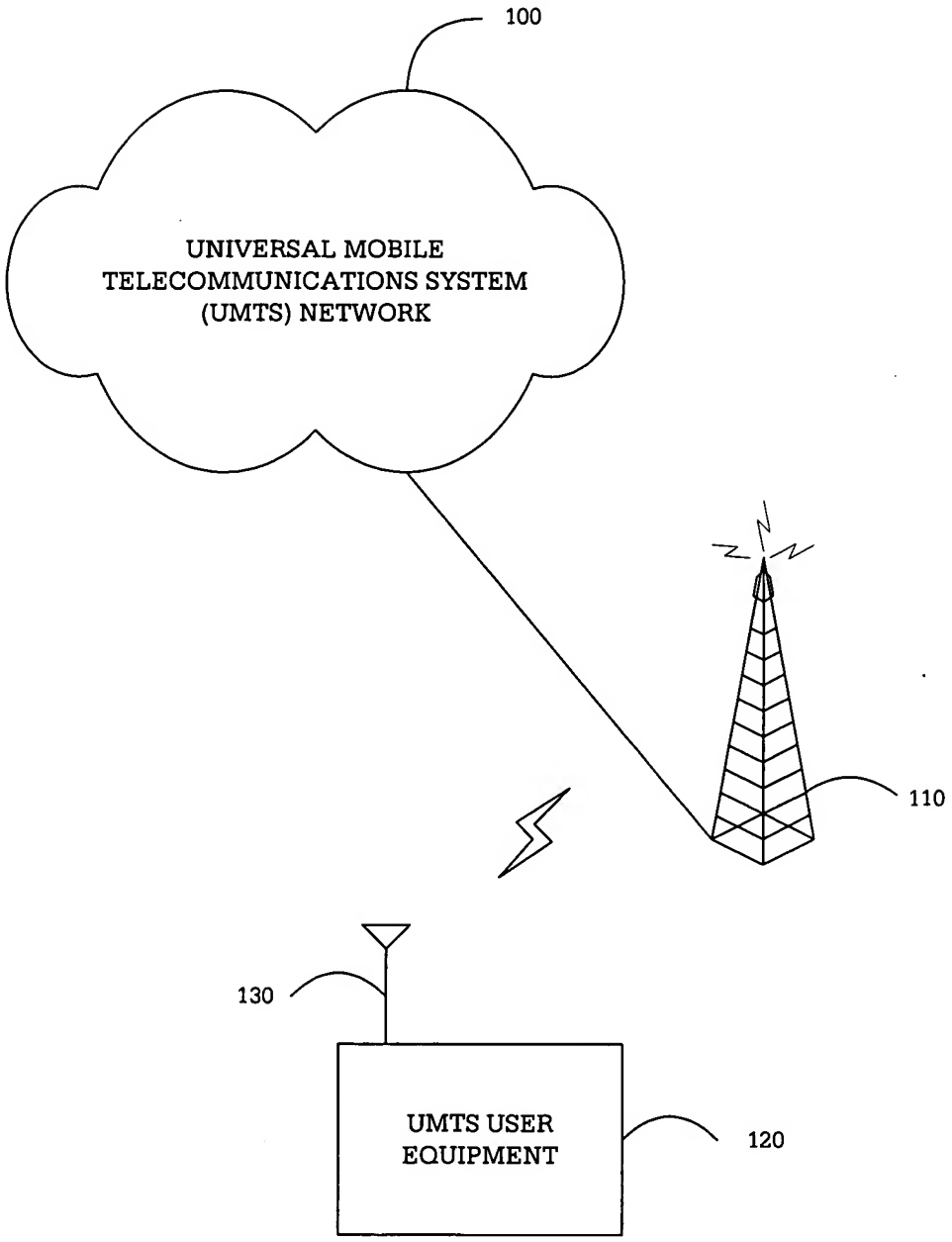
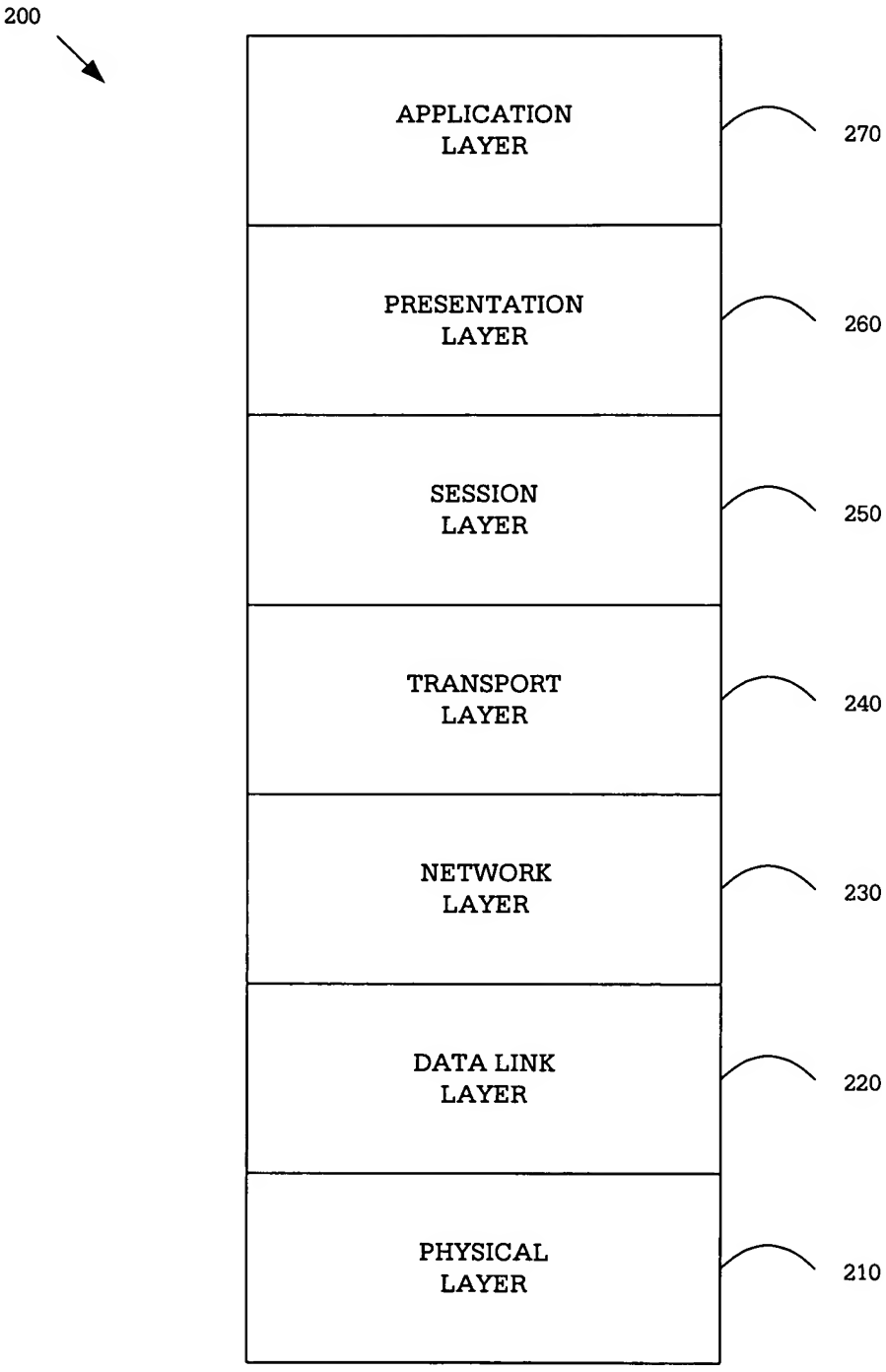

100
UNIVERSAL MOBILE
TELECOMMUNICATIONS SYSTEM
(UMTS) NETWORK
110
130
UMTS USER
EQUIPMENT
120

FIGURE 1



OPEN SYSTEMS INTERCONNECTION (OSI) LAYERS

FIGURE 2
PRIOR ART

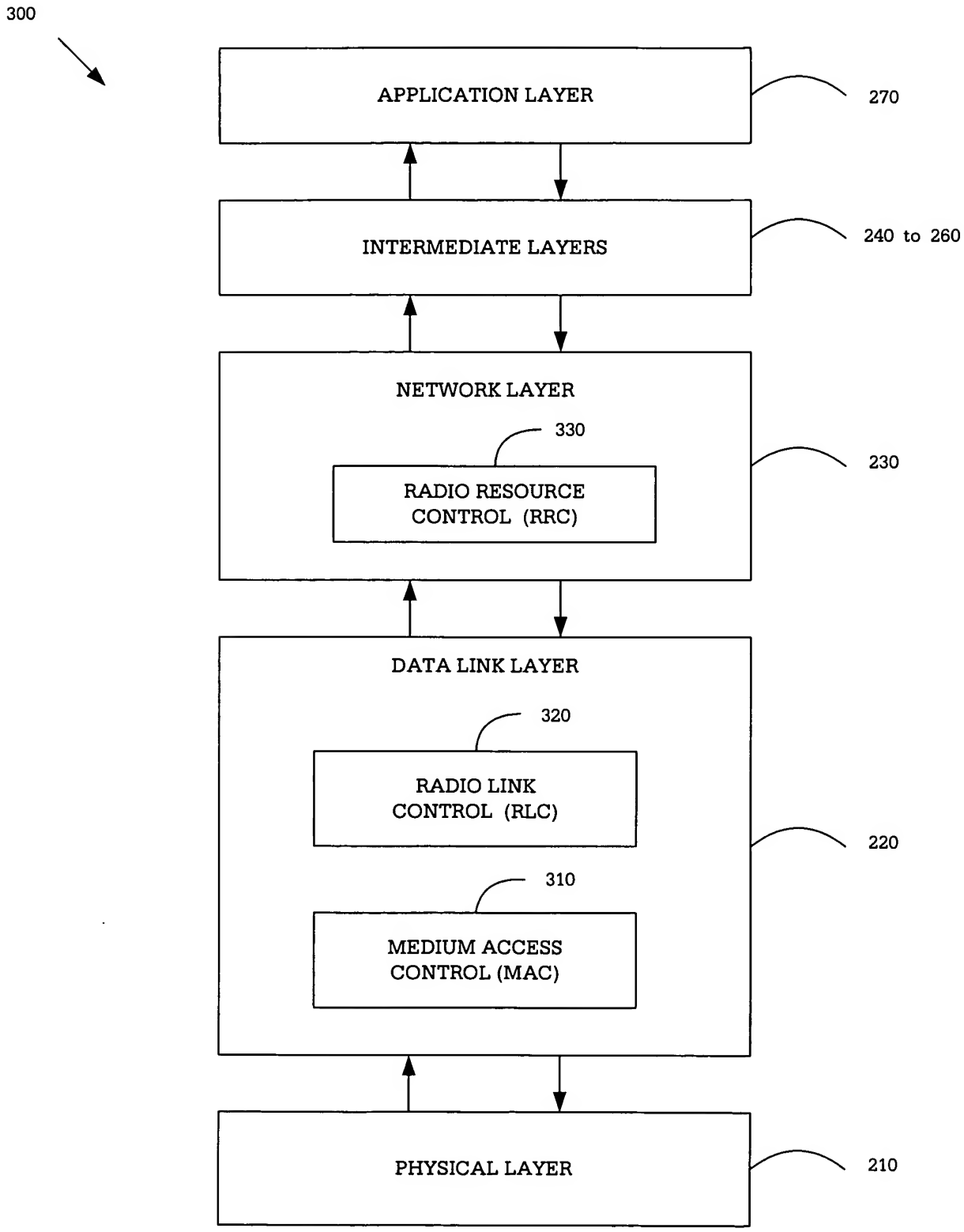


FIGURE 3
PRIOR ART

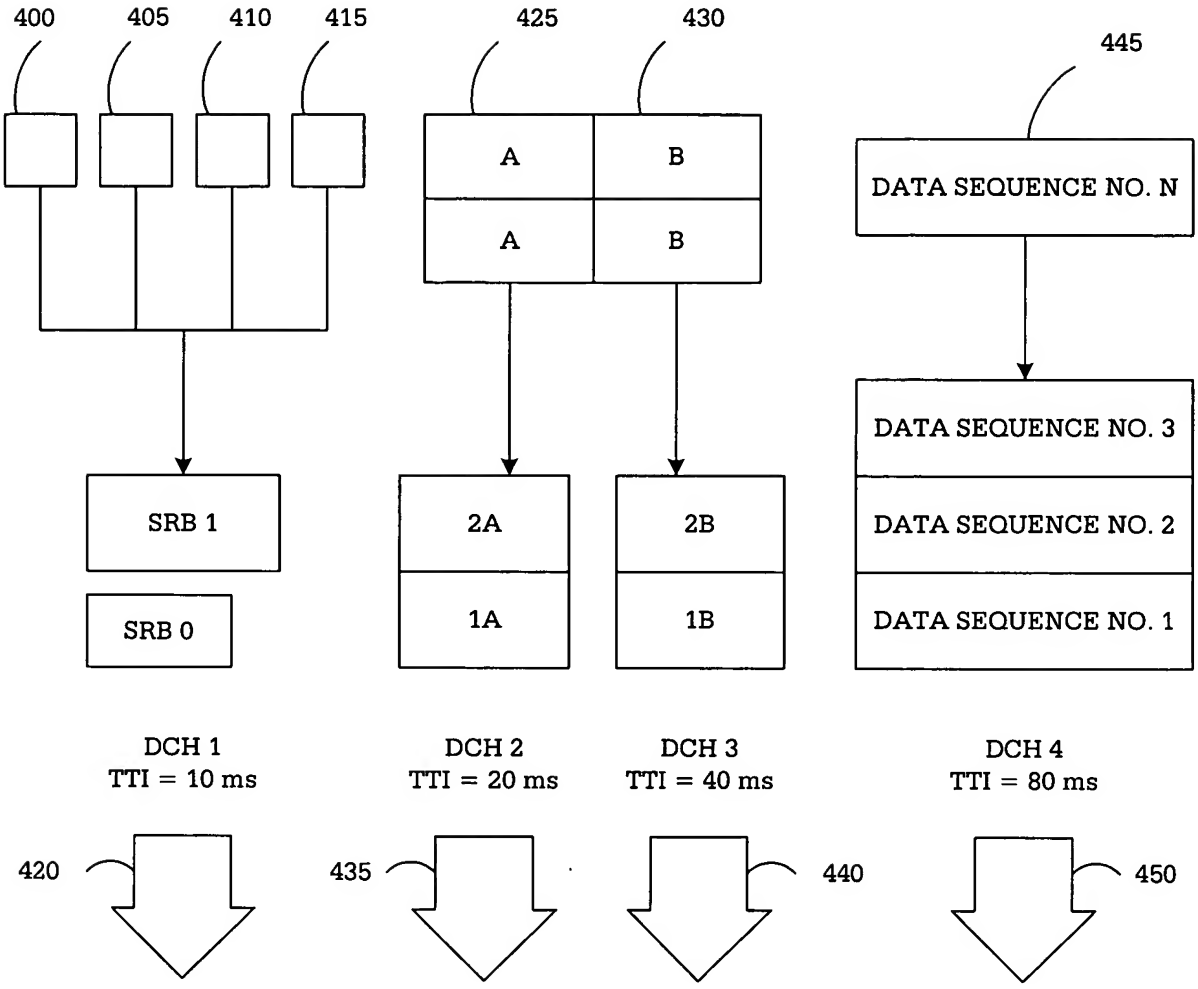
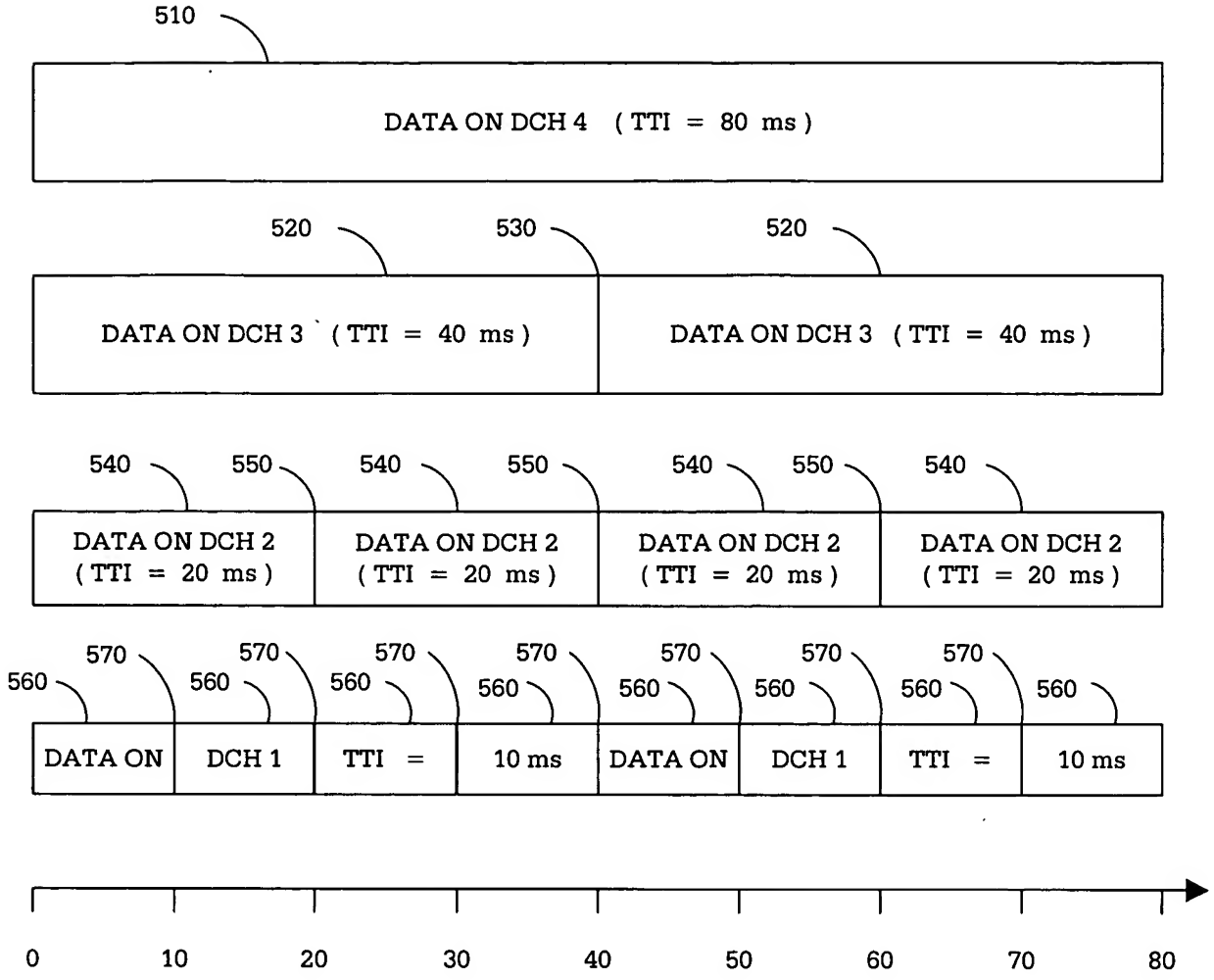


FIGURE 4
PRIOR ART



RADIO FRAME TIME IN MILLISECONDS (ms)

FIGURE 5
PRIOR ART

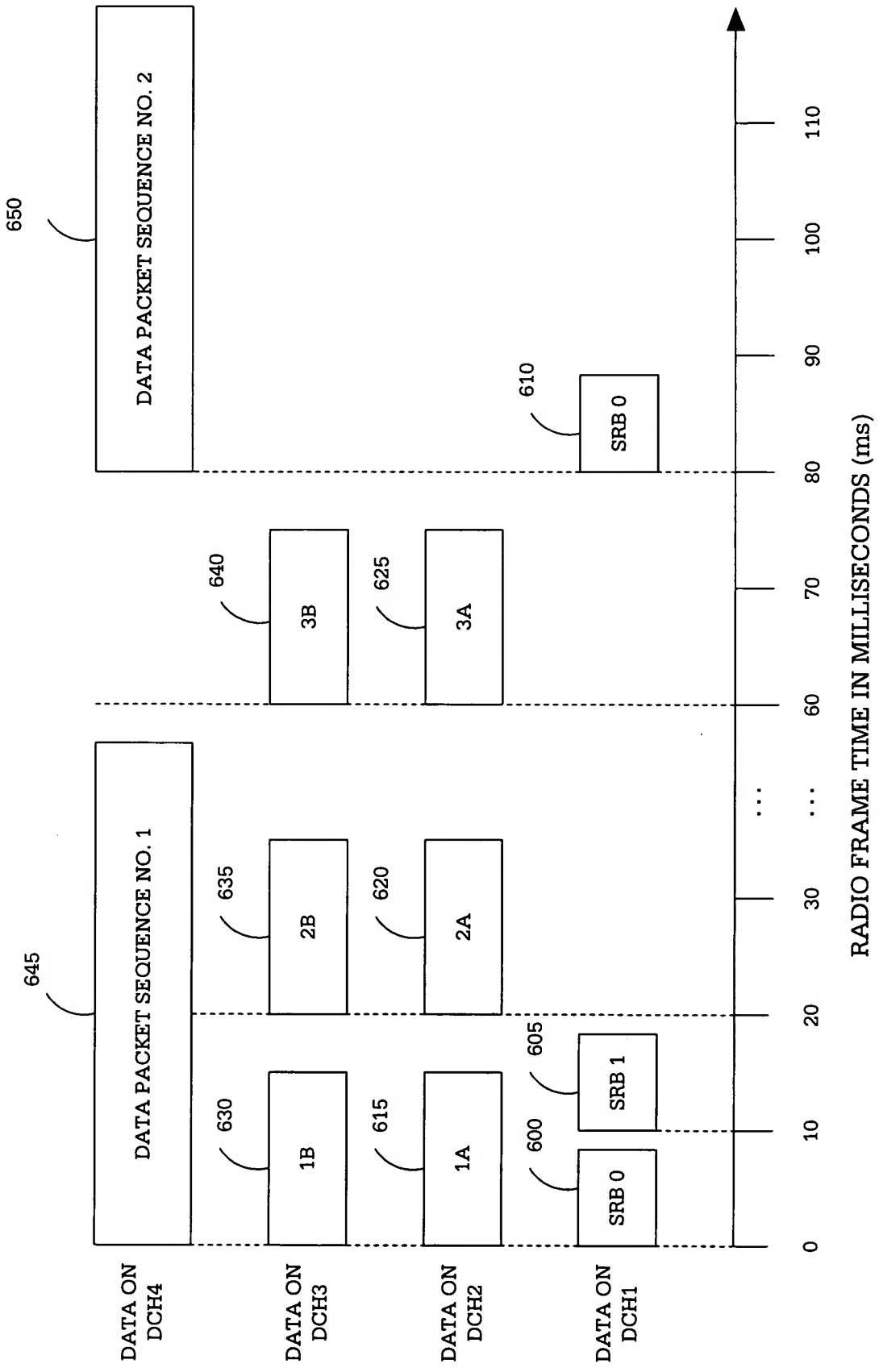


FIGURE 6
PRIOR ART

700

TFCI	TFI_1	TFI_2	TFI_3	TFI_4
0	0	0	0	0
1	1	0	0	0
2	0	1	0	0
3	1	1	0	0
4	0	0	1	0
5	1	0	1	0
6	0	0	0	1
7	0	1	1	0
8	0	1	1	1

FIGURE 7
PRIOR ART

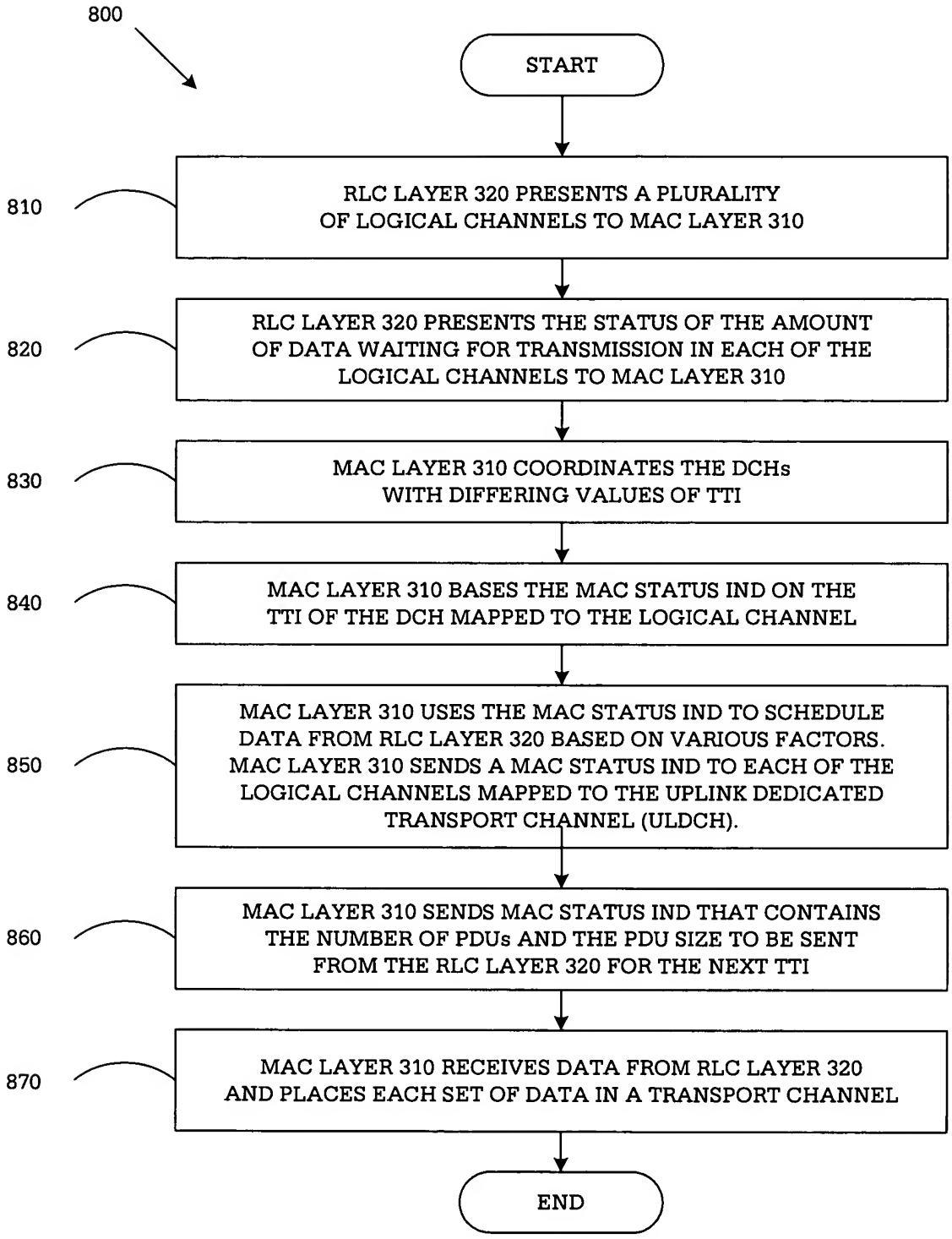


FIGURE 8
PRIOR ART

900

	DCH1	DCH2	DCH3	DCH4
TFCI	TFI LIST (TFC SET)			
0	1	0	0	0
1	0	1	0	0
2	1	1	0	0
3	0	1	1	0
4	1	1	1	0
5	0	2	0	0
6	1	2	0	0
7	0	2	1	0
8	1	2	1	0
9	0	2	1	1
10	1	2	1	1

FIGURE 9

1000

	DCH1	DCH2	DCH3	DCH4
TFCI	TFI LIST (TFC SET)			
0	1	0	0	0
2	1	1	0	0
4	1	1	1	0
6	1	2	0	0
8	1	2	1	0
10	1	2	1	1

FIGURE 10

1100

	DCH1	DCH2	DCH3	DCH4
TFCI	TFI LIST (TFC SET)			
6	1	2	0	0
8	1	2	1	0
10	1	2	1	1

FIGURE 11

1200

	DCH1	DCH2	DCH3	DCH4
TFCI	TFI LIST (TFC SET)			
8	1	2	1	0
10	1	2	1	1

FIGURE 12

1300

	DCH1	DCH2	DCH3	DCH4
TFCI	TFI LIST (TFC SET)			
8	1	2	1	0

FIGURE 13

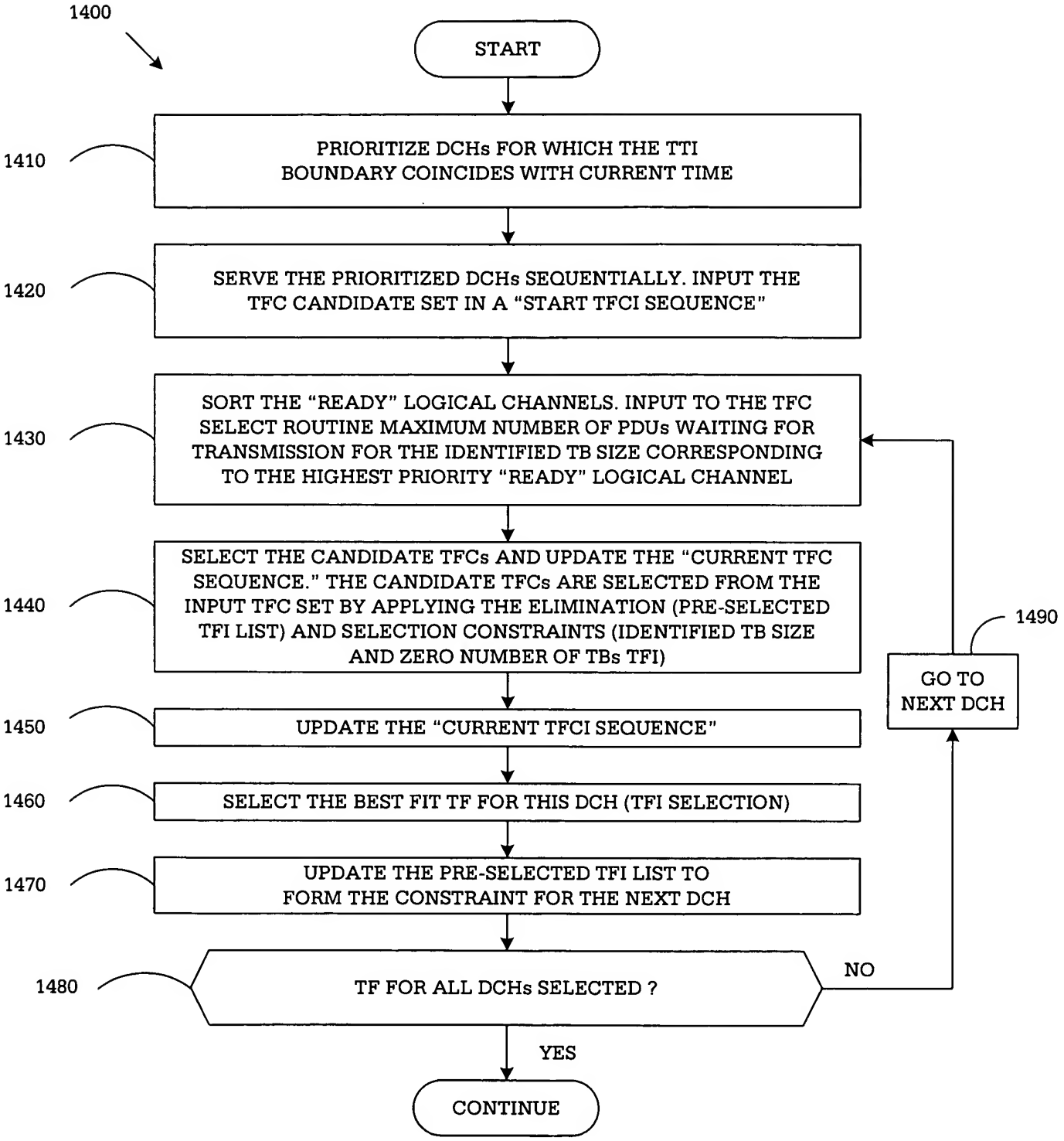

1400
START
1410
PRIORITIZE DCHs FOR WHICH THE TTI BOUNDARY COINCIDES WITH CURRENT TIME
1420
SERVE THE PRIORITIZED DCHs SEQUENTIALLY. INPUT THE TFC CANDIDATE SET IN A "START TFCI SEQUENCE"
1430
SORT THE "READY" LOGICAL CHANNELS. INPUT TO THE TFC SELECT ROUTINE MAXIMUM NUMBER OF PDUs WAITING FOR TRANSMISSION FOR THE IDENTIFIED TB SIZE CORRESPONDING TO THE HIGHEST PRIORITY "READY" LOGICAL CHANNEL
1440
SELECT THE CANDIDATE TFCs AND UPDATE THE "CURRENT TFC SEQUENCE." THE CANDIDATE TFCs ARE SELECTED FROM THE INPUT TFC SET BY APPLYING THE ELIMINATION (PRE-SELECTED TFI LIST) AND SELECTION CONSTRAINTS (IDENTIFIED TB SIZE AND ZERO NUMBER OF TBs TFI)
1450
UPDATE THE "CURRENT TFCI SEQUENCE"
1460
SELECT THE BEST FIT TF FOR THIS DCH (TFI SELECTION)
1470
UPDATE THE PRE-SELECTED TFI LIST TO FORM THE CONSTRAINT FOR THE NEXT DCH
1480
TF FOR ALL DCHs SELECTED ?
NO
1490
GO TO NEXT DCH
YES
CONTINUE

FIGURE 14

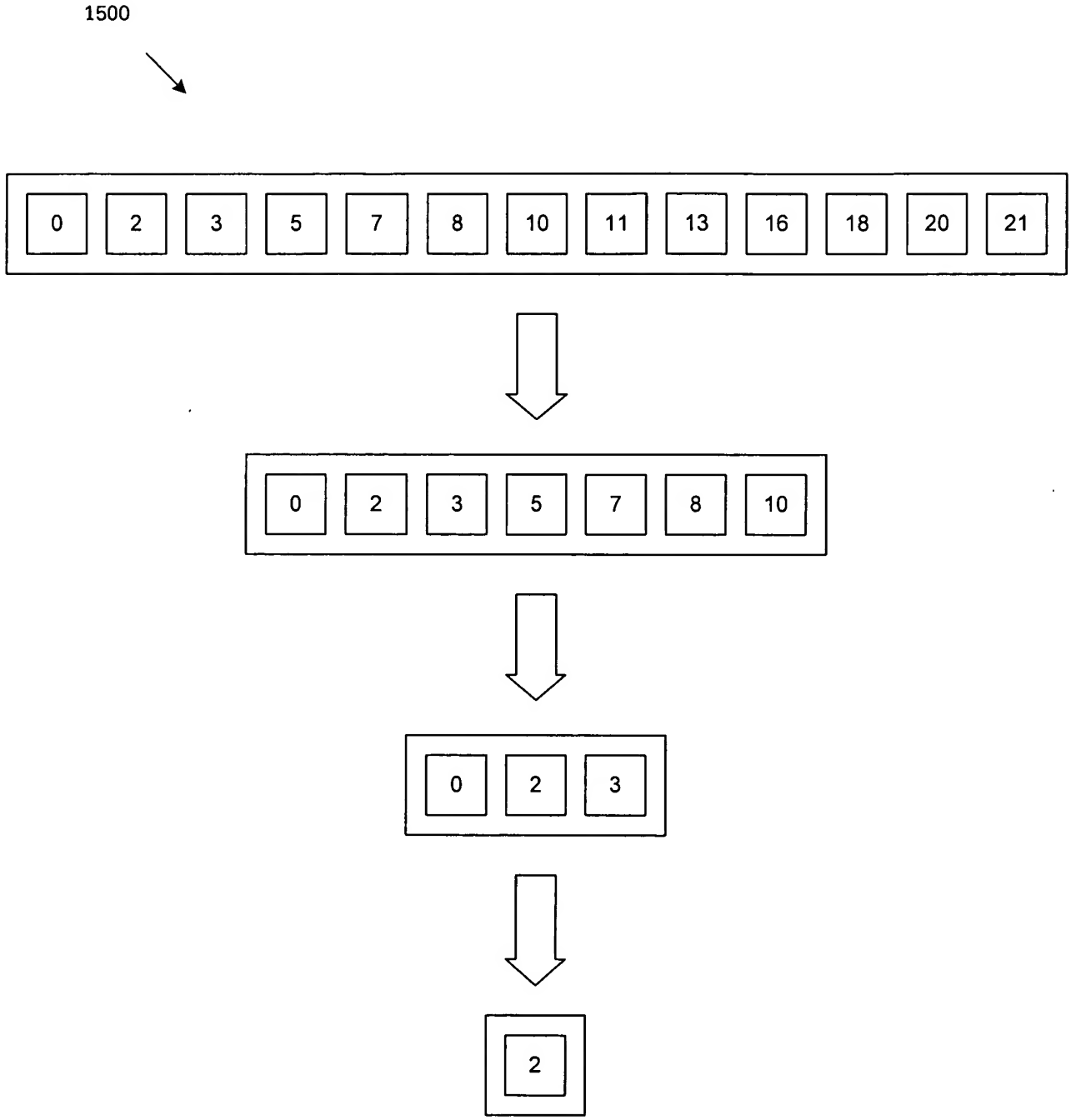


FIGURE 15